

# URBAN SYSTEMS TRANSFORMATION

## ALICE SPRINGS



# THE URBAN CHALLENGE

Future Earth Australia, hosted by the Australian Academy of Science, is leading a process to co-design a national strategy for Australian sustainable cities.

Australia is already one of the most urbanised countries in the world, with 89% of the population living in urban areas (UNDESA, 2014) and 67% living in the capital cities. Australia's estimated resident population of 24.6 million people (June 2017) is projected to increase to between 37.4 and 49.2 million people by 2066 (ABS, 2018). All capital cities are projected to grow at a greater pace than the rest of their respective state or territory (ABS, 2018). Some are seeking to constrain growth; others, including many regional centres, are looking for extra or renewed growth.

Our urban environments are an interrelated system comprising social, economic, ecological and technical spheres. Urban systems transformation is needed to ensure that people can move around efficiently, live in safe and healthy homes, receive adequate education and medical care and enjoy lives of social equity in a healthy and biodiverse environment.

The metropolitan plans for most Australian capital cities include consistent sustainability planning and design principles such as containing urban sprawl, reducing car dependency and providing greater housing choices. However, in practice, urban decision-making is subject to numerous complex drivers—social, environmental, economic, institutional, technological—with the potential to create barriers to sustainable development.

The challenge lies in ensuring effective and consistent urban policy and decision-making in the complex urban institutional environment (across spatial scales and decision-making levels, and across sectors), with genuine stakeholder and community engagement

that understands the many and varied underlying aspirations and values. In turn, this process needs to be guided by a shared vision of our urban futures, underpinned by approaches to co-produce, share and implement knowledge to inform decision-making. In this context all decision-makers and stakeholders are both providers and users of knowledge.

However, current urban development and decision-making is characterised by a lack of shared vision and excessive fragmentation in institutional arrangements and in relevant knowledge development, translation and use.

## RESPONDING TO THE CHALLENGE

Future Earth Australia is working to improve the appreciation of the underlying barriers and enablers to sustainable urban development, and the supporting development, synthesis, translation, accessibility and application of relevant knowledge. Through a nationwide consultative process, it is co-developing a national strategy for the sustainable development of Australia's cities and communities over the coming decades.

Through a series of workshops in the capital cities, Future Earth Australia asked policymakers, practitioners, researchers, businesses and community stakeholders to contribute to the development of local and national strategies. Each workshop included a special focus on the specific city and the surrounding region, as well as implications for a national approach.

# THE IMPORTANCE OF A NATIONAL STRATEGY

To be successful, transformational strategies will need to include shared urban visions of feasible and desirable futures, with a focus on:

- key systemic leverage opportunities
- collaborative and aligned urban governance integrated across systems, sectors and scales
- effective stakeholder and community engagement across multiple goals and diverse values
- co-produced knowledge development and use by policy and urban decision-makers.

These elements should all be supported by continuing learning and adaptive management. A national strategy will provide governments, practitioners, business, communities and researchers with recommendations for cost-effective and integrated urban systems transformation.

To help us achieve these goals, workshop participants are asked to consider:

- current issues and future visions for their city and region
- how to improve engagement outcomes with stakeholder and community groups by policy and decision-makers
- actions that if taken locally (at state/territory level) and nationally would increase the sustainable development of the city/region
- how such actions might contribute to a national strategy for urban systems transformation.

A national strategy will also help Australia meet our commitments under the United Nations' Sustainable Development Goals (SDGs). SDG 11 is to 'make cities and human settlements inclusive, safe, resilient and sustainable', but transformation is underpinned by integration of all 17 of the goals.

# Alice Springs workshop

On 15 February 2019 Future Earth Australia held the sixth in a series of national workshops for its project 'Urban systems transformation: sustainable cities'. The Alice Springs workshop was hosted by Desert Knowledge Australia at the Alice Springs Town Council. Eight stakeholders from territory government, city councils, local businesses, NGOs and research groups

participated. This document summarises discussions grouped under the following workshop themes: urban visioning initiatives and pathways; collaborative governance and decision-making; stakeholder and community engagement; and co-produced knowledge development, usage and learning.





## SPEAKERS

**Mr Jimmy Cocking, Board Director,  
Desert Knowledge Australia**

Mr Cocking began by acknowledging traditional owners of the land past, present and future. Desert Knowledge Australia (DKA) was founded in 2007 and has a key focus to achieve intracultural engagement across desert areas. Mr Cocking is one of seven DKA Board Directors.

One of DKA's programs, Codes 4 Life, encourages Aboriginal men to reconnect with their cultural identities, responsibilities and communities. It is led by Mr Michael Liddle, and serves Aboriginal men across the country. The program includes workshops for men in prison and juvenile detention on how to engage with Western society while remaining connected to their cultural legacy.

Mr Cocking introduced two other organisations that are doing similar work to DKA. The Indigenous Desert Alliance connects desert-based land managers who are working on Indigenous lands throughout Western Australia, South Australia and the Northern Territory to improve cultural, environmental, economic and social outcomes. The Arid Lands Environment Centre (ALEC) is central Australia's peak environmental organisation, which has been advocating for the protection of nature and ecologically sustainable development in the arid lands since 1980. In 2014 ALEC and DKA produced the *Roadmap to a desertSMART Town 2013–18: A vision for a sustainable resilient Alice Springs*, which focused on challenges faced in Alice Springs, including water and renewable energy.

There are many issues with water in Alice Springs, as currently usage is high and there is no water recycling. Adelaide and Perth have a system for treating water and pumping it back into aquifers to replenish reservoirs, and a similar system could be used in Alice Springs. This fits into the larger idea of a circular economy, in which water productivity is maximised and renewable energy is predominant.

**Mayor Damien Ryan, Mayor, Alice Springs Town Council**

Mayor Ryan acknowledged the traditional owners and custodians of the land and provided historical background on the town council and its sustainability programs. In 1980, the program Cities for Climate Protection aimed to reduce greenhouse gases

and create a solar-powered city. By 2018, a cities power partnership had been created between local governments to encompass 300 towns and cities, with the goal of setting achievable targets for sustainability. The partnership's goal of sustainability also includes financial sustainability, as cost-shifting from the federal government has impacted local governments, which now need to do more with less funding.

The *Alice Springs Town Council Climate Action Plan 2018–2021* set targets for 2021, which, if achieved, will establish Alice Springs as a model city that will hopefully influence other regions. The plan aims for 50% renewable energy to be sourced by 2021, supplemented by using Alice Springs's solar grid. Other initiatives include increased water efficiency, a new waste management facility and working with local businesses to reward sustainable practices, such as using reusable cups at coffee shops. Finally, Mayor Ryan emphasised that Alice Springs will have very different needs to larger cities like Sydney and Melbourne, so there will need to be tailored solutions in this region.

## VISIONS FOR ALICE SPRINGS

Participants were asked to consider their vision for a sustainable future in Alice Springs and to use their devices to enter applicable words into an online poll to generate a word cloud.

When asked 'What is your vision for a sustainable future in Alice Spring?', the words *integrated* and *hub* were the most popular, with two entries each (word cloud 1). Alice Springs is often thought of as a hub for activity in the southern Northern Territory given its central location and proximity to the Uluru-Kata Tjuta National Park. Participants noted that this creates a co-dependence between Alice Springs and the smaller communities, as the hub cannot function without the spokes.

Participants discussed integration of Alice Springs with the rest of Australia, as they perceived that the needs of Alice Springs are overwhelmed by the needs of larger cities. Indeed, Alice Springs encompasses a large area, but the population is sprawled across a long distance, so integration can be a challenge.



Word cloud 1: Vision for a sustainable future in Alice Springs

The most popular answers to the question ‘What is your vision for a sustainable future nationally?’ were *leadership*, *treaty* and *diversity/diversified*, with two entries each. Participants emphasised that local governance was needed at the appropriate scales, as national initiatives might not suit the particular needs of Alice Springs. *Diversity* referred to the varied population that already exists in Alice Springs, with a large Indigenous community, while also reflecting current and future immigration from Eurasia to the Alice Springs region.

*Treaty* refers to a desire for a formal agreement between the Australian government and Indigenous people that would have legal outcomes. This treaty could recognise Indigenous peoples’ history and prior occupation of the land, as well as the injustices that many have endured



Word cloud 2: Vision for a sustainable future nationally

The question ‘What is your vision for 2030 to 2050?’ elicited a variety of responses, including *new economy*, *sustainable* and *dynamic*. Participants noted that coordination across levels of government was difficult and often slowed the governance process. Yet the Australian nation has mobilised quickly on policy issues before, such as those concerning firearms, with rapid unification across states. This type of dynamic governance is needed to address the pressing issue of creating a sustainable future.



Word cloud 3: Vision for Alice Springs for 2030–2050

### KNOWLEDGE GAPS

Participants spoke about the identity of the region and how it might change. Even amongst residents, the current and future views of Alice Springs vary dramatically. Some see it as the heart of the nation, while others see it as isolated, especially because of its remoteness and the high cost of flights to the area. Some see it as a challenge or a frontier, attracting strong, outspoken personalities. It was suggested that younger people view Alice Springs as an area for talented, highly educated people to make a name, but not a place to stay and create a family. The way that other Australians perceive Alice Springs can also be difficult for retaining a vibrant population and workforce, as it is often overlooked compared to other major cities.

There was debate about how the economy of Alice Springs would change in the future. Some believe that renewable energy and new technologies would be the way forward, but some were concerned that this could reduce jobs for the community. On a broader scale, Alice Springs had a different purpose when it was settled than it currently does, and clarifying this role into the future could provide directions for the Alice Springs economy.

### STAKEHOLDER AND COMMUNITY ENGAGEMENT

Alice Spring’s diverse community, with a large Indigenous population, will require different tools for stakeholder engagement. It is important to remember that Indigenous and non-Indigenous people often have different goals, and this cultural difference can be a challenge for engagement. A way forward could be to adopt two-way engagement: rather than entering into meetings with a visionary picture of the goals, sit down and listen to everyone at the table and incorporate their ideas into yours. Trust and respect are crucial and can be developed when all stakeholders have ownership of the eventual output. For instance, Healthy Country Planning is a method for stakeholder engagement with

Indigenous peoples. It was created in Australia and has been used internationally to ensure that there is a formal process for Indigenous stakeholder engagement that is fair and equitable.

### EMERGING THEMES AND TAKE-HOME MESSAGES

The participants touched on several issues that will be important for Alice Springs in the near future. Affordable housing was considered a challenge, as was the transient population that makes sustainability difficult. Environmental concerns included fracking and access to water. A single drinking water aquifer serves the area, which is being depleted due to drought. Others noted that some high-impact decisions are made privately and cannot be changed by local government. For instance, US and Australian military bases are located near Alice Springs, meaning federal-level decisions can affect these communities.

However, it was also noted that the community of Alice Springs has easier access to decision-makers than those who live in larger cities. Therefore, it should be easier to get people to collaborate, as connections are easier to establish and reinforce.

### ALICE SPRINGS

Alice Springs covers an area of 320 km<sup>2</sup>, spanning the Todd River (a mostly dry riverbed until significant downpour) on the northern side of the MacDonnell Ranges (Alice Springs Town Council, 2019) in the Northern Territory.

Alice Springs has an arid climate in which temperatures an average temperature range of 21°C to 36°C during summer and 4°C to 20°C in winter. High rainfall is experienced during monsoon season (peak average of 42.2 mm in February), flooding the Todd River (Australian Bureau of Meterology, 2019).

While the township of Alice Springs is not, most land in the Alice Springs region (and the Northern Territory in general) is tenured by the traditional landowners, concurrent with underlying native title status (Austrade, 2019) (Figure 3).



Figure 1: Aerial photo of Alice Springs (Free Aussie Stock, 2019)

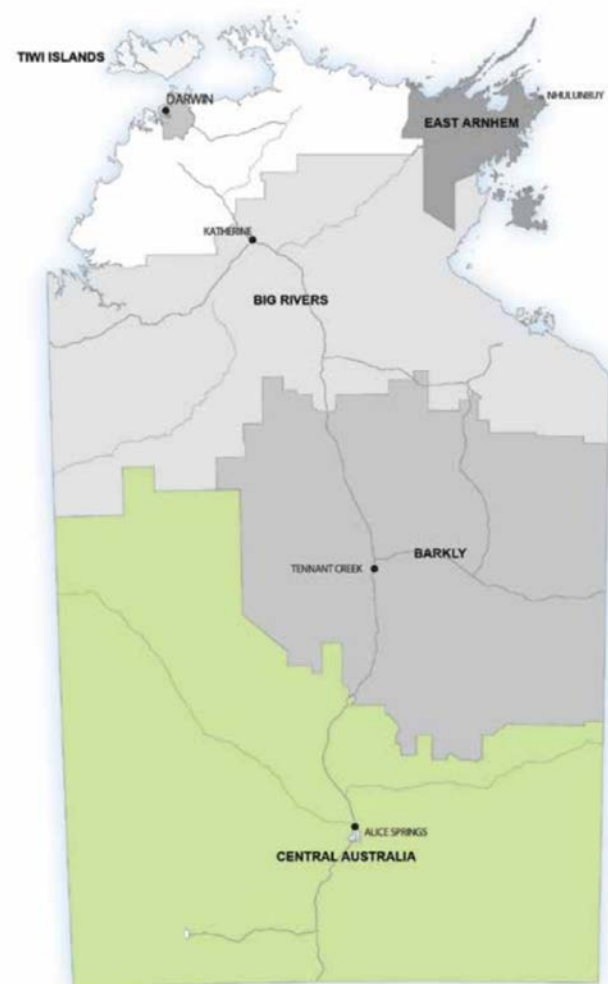
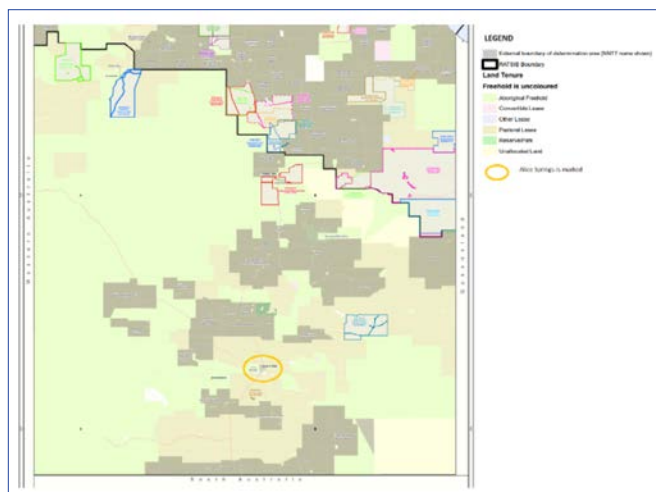


Figure 2: Northern Territory Regions (Northern Territory Government, 2017)



*Figure 3: South Northern Territory. Pale green denotes Aboriginal freehold, dark brown denotes pastoral lease and light brown indicates unallocated land (National Native Title Tribunal, 2019)*

## FACTS AND FIGURES

Alice Springs is a settlement situated at Australia's centre and is the predominant service hub for the south-Northern Territory region, along with being the touristic gateway to Uluru-Kata Tjuta National Park (Uluru). In 2015, the town of Alice Springs had a population of 28 000, with around 41 000 in the broader region (NT Department of Trade, Business and Innovation, 2017). A large percentage of the central Australian population lives in outlying communities of Alice Springs, such as the Yulara township that provides services for the tourism associated with Uluru (NT Department of Trade, Business and Innovation, 2017).

The employing industries in Alice Springs and the region are public administration (18.6%), the health sector (13.9%), education (9.8%) and retail (8.8%) (ABS, 2017b). The broader economy is powered by mining, tourism and primary industries (NT Department of Trade, Business and Innovation, 2017).

Alice Springs has diverse cultural and ethnic backgrounds, with a significant Indigenous Australian community and European (particularly English, Irish, Scottish and German), Afghani, New Zealander and Māori, and Asian (Filipino, Chinese and Vietnamese, for example) communities.

While the 2016 census estimates the Aboriginal population in the township Alice Springs to be 17.6% (ABS, 2017a), it is noted that population figures in

Aboriginal communities fluctuate dramatically and are difficult to accurately measure (Remote Area Health Corps, 2009). The Alice Springs township is on Arrernte country, surrounded by the Alyawarre, Anmatyerre, Antakirinja and Luritja nations.

## REGIONAL CHALLENGES

### Crime

Alice Springs has a very high crime rate and, in the past, has been described as one of Australia's most dangerous towns, despite crime rates decreasing in recent years. In 2018, the rate of assault per 100 000 people was 6624 (compared to 2162 in Darwin). Around 62% of these assaults were related to alcohol use. Other crimes with high rates include property damage and house break-ins (Northern Territory Police, 2019). Central Australia also has some of the highest domestic violence rates in the country (Lane, 2018).

Not only a hazard for citizens, this high rate of crime has impacted the area's tourism industry, with foreign tourists being warned to avoid the area. Most violent crime occurs between members of the Aboriginal communities, and inter-racial incidents are rare (Finnane & Finnane, 2011).

There has been difficulty combatting the rise of youth crime, such as assault, robbery and violence involving rock throwing and fighting (Doherty, 2017). The 2017 'Time to Talk' Alice Springs survey revealed that a sense of neglect amongst youth contributed to motivating the behaviour, as well as there being too little to keep people occupied (Doherty, 2017).

### Water supply

The vast majority of the water supply in the Alice Springs region is drawn from a network of groundwater reserves in the northern section of the Amadeus Basin (namely, the Mereenie Aquifer), Tower Basin, Inner Farm and Outer Farm Basins (NT Department of Environment and Natural Resources, 2018). Surface water is limited due to the unpredictability of rainfall.

The water control district for Alice Springs was declared in 2007, acknowledging the high level of competition for access and use of water in the area and to plan for bore construction permits and extraction licenses. Groundwater is considered a finite resource and has historically been used at an unsustainable rate. For



example, the Roe Creek borefield is reducing by around one metre per year (Chlanda, 2012). This not only constitutes a problem for the longevity of the town, but is associated with high costs for deeper drilling.

Unsustainable water extraction results in conflict in Alice Springs. For example, a new license was granted to a farm for 3125 megalitres of groundwater, prompting the Environmental Defenders Office (NT) and Arid Lands Environment Centre to urge the licence to be reviewed. The Power and Water Corporation (responsible for utilities across the Northern Territory) are opposed to the license on the same grounds. Sustainable use of groundwater is obscured by the dynamic change in recharge and use levels and a lack of information about these flows (Crothers, 2015). Further dissatisfaction emerged from what was perceived to be inadequate community consultation around the *Alice Springs Water Allocation Plan*, released in 2016 for the following decade (Chlanda, 2016).

### Waste management

Given the isolation and sprawl of Alice Springs, waste management is a major issue for the area. However, the extent of this waste is difficult to quantify, as information on waste types, trends and end points is limited and held by multiple entities (NT Environmental Protection Authority, 2015). Still, waste management is a costly and evolving issue for the Alice Springs community. Open pit and unlined, non-engineered landfills are common, while the low population density makes it difficult to ensure all have easy access to recycling systems (Waste Management Review, 2016). The *Waste Management Strategy for the Northern Territory 2015–2022* was released in 2015 to address some of these issues and plan for a more sustainable future (NT Environmental Protection Authority, 2015). Some progress has been made since then, as when kerbside recycling was introduced in Alice Springs in July 2018 (Alice Springs Town Council, 2017). However, waste management remains a pressing and ongoing issue for the community.

## MAJOR PLANNING DOCUMENTS

### *Alice Springs Town Council Municipal Plan 2018/19–2021/22*

The *Municipal Plan 2018/19–2021/22* outlines the Council's goals, objectives and strategies, and involved community consultation through a questionnaire focused on priorities and planning. The current iteration includes four areas of strategic focus. The key performance indicators for each strategy are elaborated upon in the *Alice Springs Town Council Strategic Plan 2018–2021*. Development of high-quality infrastructure is seen as a core facet of achieving the town's strategic goals, particularly in terms of economic development, social infrastructure and sustainability.

Support for recreational and cultural infrastructure is a core goal for encouraging positive social interactions and quality of life in Alice Springs. This involves ongoing maintenance and development of recreation areas, active travel paths, new parks, open spaces, shade and support for public art. It also involves a collaborative approach to community service provision with the Lhere Artepe Aboriginal Corporation and other Indigenous organisations, a strategic focus on youth initiatives, such as a youth council, programs that encourage leadership and developing projects that celebrate local cultural practices.

Efficient use of water, effective waste management and the development of renewable energy infrastructure are major objectives associated with the sustainability goals of the plan. These involve actions to encourage behaviour change in the community, developing and maintaining expert committees on topics such as energy efficiency and investigating novel technologies.

### *Alice Springs Town Council Strategic Plan 2018–2021*

The *Alice Springs Town Council Strategic Plan 2018–2021* documents the holistic vision for Alice Springs from social, cultural, environmental and economic perspectives. Maintaining a dynamic community (defined by inclusion, social investment and reliable infrastructure), being a great place to live and being a leader in sustainability are the three overarching strategic objectives that guide the plan.

## Central Alice Springs Area Plan

The Northern Territory Planning Commission's *Central Alice Springs Area Plan* is currently undergoing consultation, with the most recent draft emerging in mid-2018. This land use and development policy establishes a long-term vision using maps, planning principles and objectives to give the community, industry and decision-makers understanding and confidence about future land uses. The plan aims to:

- reinforce the Alice Springs central business district as a vibrant commercial, cultural, administrative, tourist and civic hub for the region
- encourage integration of the central business district and surrounding areas
- maintain the character of established localities while enhancing connectivity and respecting environmental, heritage and recreation values.

## Alice Springs Water Allocation Plan 2016–2026

The *Alice Springs Water Allocation Plan 2016–2026* is a living document that provides a clear, transparent process to improve understanding and management of water resources in Alice Springs. The plan covers the Alice Springs Water Control District, spanning 8200 km<sup>2</sup> around Alice Springs. Its four main objectives are to maintain the public water supply, recognise Indigenous cultures and other community values, protect the environment and ensure sustainable development. It is reviewed at least every five years to ensure that it continues to achieve its objectives.

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